

SYSTEM AND METHOD FOR DATA ENCRYPTION
AND COMPRESSION (ENCOMPRESSION)

ABSTRACT

In one embodiment, a method of encompassing a data stream includes compressing vectors from the data stream using (e.g., transformed with) one or more Multiple Attractor Cellular Automatas (MACAs) and encrypting the compressed
5 vectors using multiple Cellular Automata (CA) transforms. In another embodiment, a system for encompassing a data stream includes a Programmable CA (PCA) operable to receive vectors from the data stream, a program memory and an index memory each operable to communicate with the PCA, and an index register operable to communicate with the index memory. The program memory stores a program that is
10 operable to configure the PCA with a rule vector of a CA and enable the PCA to be run through a number of cycles controlled by the program, a resulting Pseudo-Exhaustive Field (PEF) value being directed to address the index memory. The index memory provides values to the index register, enabling a code-book index to be
15 generated for a token loaded into the PCA.